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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/010,440	11/08/2001	Kari Kirjavainen	U 011573-2	8064

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Ladas & Parry
26 West 61st Street
New York, NY 10023

EXAMINER	
HOOK, JAMES F	

ART UNIT	PAPER NUMBER
3752	22

DATE MAILED: 03/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/010,440	KIRJAVAINEN ET AL.	
	Examiner	Art Unit	
	James F. Hook	3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 December 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,9-12,15 and 16* is/are rejected.

7)☒ Claim(s) *7,8,13 and 14* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. *22* .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

The following is a supplemental paper to the final rejection mailed December 3, 2003.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Nishino. The patent to Nishino discloses the recited pipe comprising extruded layers including an inner layer 11 made of plastic adhesive, outside of which is an inner layer 12 made of a plastic that is electrically conductive and considered the equivalent of an electrode layer, outside of which is an insulating layer 13 of plastic adhesive separating the inner electrode layer and an outer electrode layer 14 which can also be made of electrically conductive plastic.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown in view of Schmidt. The patent to Brown discloses an inner layer 12 of plastic, a layer formed of wires 14 are electrically conductive and considered the equivalent of an electrode layer, and an outer layer formed of a plastic 16 with a metal reinforcing layer provided therein which inherently would act as an insulator between the wire layers, where breaking of the wires in layer 14 produces a signal or alarm. The patent to Brown discloses all of the recited structure with the exception of forming at least some of the layers by extrusion and using the second conductive layer 16 in combination with the inner layer to detect breakage. The patent to Schmidt discloses an alarm system comprising an inner layer 2 made of a material, paper, an electrode layer 3 in the form of aluminum foil, a plastic insulation layer 4, an outer aluminum foil layer 5 that can also be considered an electrode layer, where the two foil layers are connected together in such a way as to sound a signal when the sleeve is broken or tampered with, where at least one layer forming the sleeve is made by extrusion. It would have been obvious to one skilled in the art to modify the second metal wire layer in Brown to be an electrode type layer that in combination with the inner electrode layer would sound the alarm if the

tube were damaged or tampered with which would provide for a more precise determination that the tube had been breached as suggested by Schmidt, and where it is obvious that plastic layers can be extruded and at least one layer of Brown could be extruded as suggested by Schmidt, as such would provide for a better pipe in that the layers could then cool while they are being attached together and eliminate production steps.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brown in view of Schmidt as applied to claims 1 and 2 above, and further in view of Charboneau. The patent to Brown as modified discloses all of the recited structure with the exception of utilizing the electrode layer to detect strain to sound an alarm. The patent to Charboneau discloses the recited pipe comprising an inner layer 32 of plastic, electrodes 16, 38,46 which can sound an alarm if they are broken or can also detect strain and sound an alarm. It would have been obvious to one skilled in the art to modify the pipe in Brown as modified to use the electrode layer to detect strain to sound the alarm as suggested by Charboneau as such would sound an alarm before the electrode layer is broken.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brown in view of Schmidt as applied to claims 1 and 2 above, and further in view of Swinbanks. The patent to Brown as modified discloses all of the recited structure with the exception of using the electrode layer to create sound in the tube to cancel noise in the pipe. The patent to Swinbanks discloses the recited cancellation of sound waves in a pipe by generating a wave to cancel the noise sound waves using electrodes 1, 2, 6. It would have been obvious to one skilled in the art to modify the pipe in Brown as modified by

providing structure to use the electrode layer to create a sound wave that will cancel out noise waves in the pipe as suggested by Swinbanks to make the pipe quieter.

Claims 5, 6, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt in view of Thomas. The patent to Schmidt discloses all of the structure above with the exception of forming the insulating layer of a foamed material which inherently would have holes. The patent to Thomas discloses that it is old and well known to foam plastic materials in layers of a sleeve if certain properties are desired. It would have been obvious to one skilled in the art to modify the insulation layer in Schmidt to be made of any suitable plastic material including a foamed plastic as suggested by Thomas as such would provide the benefit of having some insulative properties for heat as well as for electricity.

Claims 11, 12, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt in view of Thomas as applied to claims 5, 6, 9, and 10 above, and further in view of Noone (087). The patent to Schmidt discloses all of the recited structure with the exception of forming all the layers by coextrusion and including the conductive layers. The patent to Noone discloses that it is know in the art to form all the layers of a tube by coextrusion, and that the layers can included layers with conductive material and layers without. It would have been obvious to one skilled in the art to modify the conductive layers of Schmidt as modified to all be formed by coextrusion as such is an old and known method of forming tubes as suggested by Noone where forming them by coextrusion would be cheaper and easier to perform without the need for a winding step.

Allowable Subject Matter

Claims 7, 8, 13, and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments filed September 15, 2003 have been fully considered but they are not persuasive. With respect to the arguments directed toward Nishino not teaching an electrode layer, Nishino states in column 9, lines 5-9 that layer 12 is anti static, and it is known in the art that anti static layers are layers provided with conductive materials to dissipate charge, and therefore such is considered the equivalent of a conductive layer. This is not personal knowledge but based on knowledge of what's old and known in the art, see Noone (087) for further background on this subject if needed. With respect to such a layer not being inherently high or continuous such is not persuasive when such are not claim limitations of claim 1. The outer layer is in the same way conductive based on the anti static discussion above. The adhesive layer of Nishino is made of plastic material and inherently plastic material is an insulator when not provided with conductive materials therein, and therefore would inherently be an insulating layer. With respect to Brown in view of Schmidt rejection being wound conductive layers and not layers, it is not persuasive where in the art it is known that layers can be formed by extrusion or wrapping, and claim 5 does not require any other layer structure but the innermost layer be extruded. Therefore, the electrode layers of

claim 5 are not required to be extruded and can be formed by wrapping. Both Schmidt and Brown deal with identifying failure of tubular articles so they are considered related art, regardless of whether one tube is used to encase wires and the other is intended to be used with fluids, both deal with detecting failure. The examiner is not required to completely modify one reference with the other. The motivation to combine comes from the fact that both references deal with solving the problem of detecting failure or breakage of a tubular layer. The tubular layers of Schmidt that lie outside of the wire that they carry is a tubular structure and therefore a tube when no other claim language exists for limiting the tube function. It is considered that Schmidt therefore has an innermost layer, the fact that the layer is in contact with what it carries, in this case a plurality of wires 1, does not take away from the teachings of the tubular portion of Schmidt where the innermost layer is provided as set forth above. Thomas is not required to teach the innermost layer, only to modify forming the sleeve of foamed material. With respect to the evidence provided in paper 19, filed October 1, 2003, such supports the examiners position that antistatic additives provide the layer with conductivity. Further, the applicant's specification states on page 10, lines 16-18, that the electrode layer can be made of conductive plastic. The reference to Nishino above teaches using an anti static agent added to the plastic of certain layers, such is known in the art to be the addition of conductive fillers such as carbon black. If evidence of this is required see the reference to Noone. This is further reinforced by the article supplied with the supplemental response of October 1, 2003 which states on page 628, section 10.2 that conductive fillers can be used in plastics to increase their conductivity, then

goes further in section 10.2.3 to state that conductive filler such as carbon black are incorporated into plastic to give antistatic properties for uses where explosive material is being conveyed, and further that such can be used in electronic switches which suggests that a fair amount of conductivity must exist in the plastic to allow it to be useful as a switch, which is known for allowing and interrupting electric charge flow. Since Nishino deals with adding antistatic agents to a hose for conveying explosive fluids such as fuel, it is believed that the evidence given in the Plastics Additives Handbook (evidence from paper 19 mentioned above) supports that the conductive plastic layer in Nishino is capable of being an electrode layer, and further is supported by the applicants specification which lists conductive plastics as a known useable material for the electrode layer.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patent to Noone (218) disclosing a state of the art pipe.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James F. Hook whose telephone number is (703) 308-2913. The examiner can normally be reached on Monday to Wednesday, work at home Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Mar can be reached on (703) 308-2087. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.

James F. Hook
Primary Examiner
Art Unit 3752

JFH